



Resident Rotation:Immunohematology Reference Lab (IRL) Module 1: Introduction to IRL & ABO/Rh Testing













▲ **New York** Blood Center Enterprises

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CELLULAR AND TRANSFUSION PRODUCT AND SERVICE
NEEDS FOR PATIENTS. NOW PROVIDING ALMOST ONE MILLION
BLOOD PRODUCTS, OVER 450,000 LABORATORY AND MULTI-ASSAY
INFECTIOUS DISEASE TESTS AND OVER 12,500 SPECIALTY CLINICAL
PROCEDURES ANNUALLY TO HOSPITALS NATIONWIDE.

















Welcome to the IRL!



Hello, my name is Lynsi...

Your week in the IRL will include:

- Online modules
- Bench work in the IRL
- Virtual discussion

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Module 1: Introduction & ABO/Rh

- Introduction to this week and to the IRL
- Pre-test
- · Theory: ABO/Rh

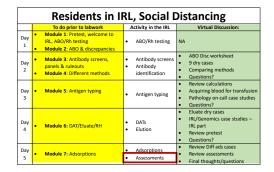






















What is an "IRL"?

- Immunohematology Reference Laboratory
 - · Accredited by the AABB
 - Staffed by Medical Laboratory Scientists/Specialists in Blood Banking
 - Testing/consulting:
 - Complex serology (antibody) problems
 - Warm autoantibodies
 - · Provision of rare blood/blood products for patients
 - Platelet antibody testing











What is an IRL?



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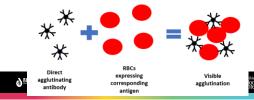


Agglutination reactions

Tube testing

- · Direct agglutination:

 - Antibody + RBCs = visible agglutination
 Used for ABO/Rh testing
 Detects mostly IgM antibodies
 Immediate spin phases of testing



Grading Agglutination Reactions













• Front type: What antigens are expressed on patient cells? • Patient RBCs • Rnown antibody (Reagents: anti-A, anti-B) • Back type: What antibodies are in patient's plasma? • Patient plasma (contains antibodies) • Known RBCs (Reagents: A, cells, B cells)

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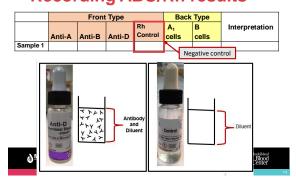
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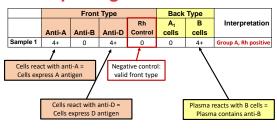
Recording ABO/Rh results

Blood Bank

Community Blood Center



Interpreting ABO/Rh results



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Your blood type is forever & unchanging, right?

Example when a person's blood type can change:

Allogeneic HSCT

Different reagents (or methods) give different results

- · Variant D antigens
- "My physician told me I was group A, Rh negative, and the blood center told me I was group A, Rh positive..."
- · Variant D antigens
- Weak A subgroups









Rhode Island Blood Center

Let's perform ABO/Rh typing:

The following video demonstrates how to perform ABO/Rh testing. As you watch, you may want to follow along with the *Blood Type Procedure* (pink page) in your handbook.



ABO/Rh Typing

https://youtu.be/pXQ59VDMaHA





















